PATENT CLAIMS

1. A measuring electrode arrangement (1) for electro-impedance tomography, having at least one measuring electrode (5) for electric contacting of a measurement object (2), a storage space (7) being arranged on the side of the measuring electrode (5) facing away from the measurement object (2), the storage space containing a contact medium (6) for reducing the electric contact resistance between the measuring electrode (5) and the measurement object (2), the measuring electrode (5) being at least partially permeable for the contact medium (6), while the contact medium (6) contains ions in aqueous solution, characterized in that
the ions can diffuse through the measuring electrode (5), whereas the measuring electrode (5) is impermeable for the liquid used as the solvent.

2. The measuring electrode arrangement (1) according to Claim 1, characterized in that the contact medium (6) is a liquid, a gel, a foam or a paste.

3. The measuring electrode arrangement (1) according to at least one of the preceding claims, characterized in that an adhesive layer (3.1, 3.2) is arranged on the side of the measuring electrode arrangement (1) facing the measurement object (2) in order to attach the measuring electrode arrangement (1) to the measurement object (2).

4. The measuring electrode arrangement (1) according to at least one of the preceding claims, characterized in that the storage space (7) is bordered by a plastic layer (9).

5. The measuring electrode arrangement (1) according to at least one of the preceding claims, characterized by at least one electric shield (11) which consists of an electrically conductive material and is electrically insulated with respect to the measuring electrode (5).

6. The measuring electrode arrangement (1) according to Claim 5, characterized by a plurality of measuring electrodes (5) that are electrically insulated with respect to one another.

7. The measuring electrode arrangement (1) according to Claim 6, characterized by a plurality of shields (11) that are electrically insulated with respect to one another, each shield (11) being arranged on one of the measuring electrodes (5).

8. The measuring electrode arrangement (1) according to Claim 6, characterized by a common electric shield (11) for the measuring electrodes (5).

9. The measuring electrode arrangement (1) according to at least one of Claims 5 through 8, characterized in that the shield (11) is arranged on the side of the measuring electrode (5) facing away from the measurement object (2).

10. The measuring electrode arrangement (1) according to at least one of Claims 5 through 9, characterized in that the measuring electrodes (5) are mounted on a belt-like electrode carrier (8), wherein the electrode carrier (8) is extensible for adjusting the electrode spacing.

11. A use of a measuring electrode arrangement (1) according to at least one of the preceding claims for electroimpedance tomography.